

(SMALL-SIGNAL TRANSISTOR)

2SC4356

FOR HIGH CURRENT DRIVE APPLICATION
SILICON NPN EPITAXIAL TYPE

DESCRIPTION

2SC4356 is a silicon NPN epitaxial type transistor designed relay drive application.

FEATURE

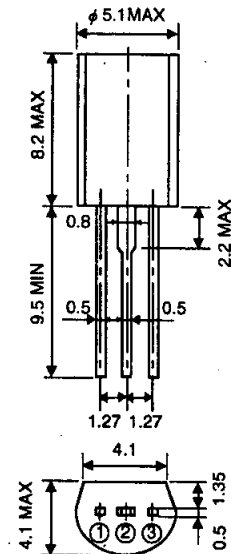
- High voltage $V_{CE0}=60V$
- High collector current $I_C=2A$
- Low $V_{CE(sat)}$ $V_{CE(sat)}=0.5V_{max}$ ($I_C=1A, I_B=50mA$)
- High collector dissipation $P_C=900mW$

APPLICATION

Audio machine, VCR, relay drive.

OUTLINE DRAWING

Unit:mm



TERMINAL CONNECTOR

- ① : EMITTER EIAJ : — JEDEC : —
- ② : COLLECTOR
- ③ : BASE

Note)
The dimension without tolerance represent central value.

MAXIMUM RATINGS (Ta=25°C)

Symbol	Parameter	Ratings	Unit
V_{CBO}	Collector to Base voltage	60	V
V_{EBO}	Emitter to Base voltage	6	V
V_{CEO}	Collector to Emitter voltage	60	V
I_{CM}	Peak Collector current	3	A
I_C	Collector current	2	A
P_C	Collector dissipation(Ta=25°C)	900	mW
T_j	Junction temperature	+150	°C
T_{stg}	Storage temperature	-55 to +150	°C

ELECTRIAL CHARACTERISTICS (Ta=25°C)

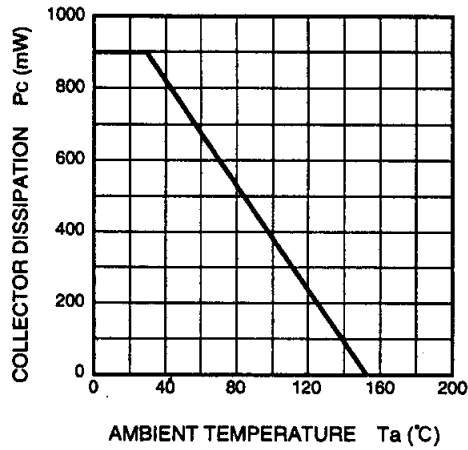
Symbol	Parameter	Test conditions	Limits			Unit
			Min	Typ	Max	
$V_{(BR)CBO}$	C to B break down voltage	$I_C=10\mu A, I_E=0$	60			V
$V_{(BR)EBO}$	E to B break down voltage	$I_E=10\mu A, I_C=0$	6			V
$V_{(BR)CEO}$	C to E break down voltage	$I_C=2mA, R_{BE}=\infty$	60			V
I_{CBO}	Collector cut off current	$V_{CB}=50V, I_E=0$			0.2	μA
I_{EBO}	Emitter cut off current	$V_{EB}=4V, I_C=0$			0.2	μA
$h_{FE} *$	DC forward current gain	$V_{CE}=4V, I_C=100mA$	55		300	—
$V_{CE(sat)}$	C to E saturation voltage	$I_C=1A, I_B=50mA$		0.2	0.5	V
f_T	Gain band width product	$V_{CE}=2V, I_E=-10mA$		80		MHz
C_{ob}	Collector output capacitance	$V_{CB}=10V, I_E=0, f=1MHz$		18		pF

* : It shows h_{FE} classification in right table.

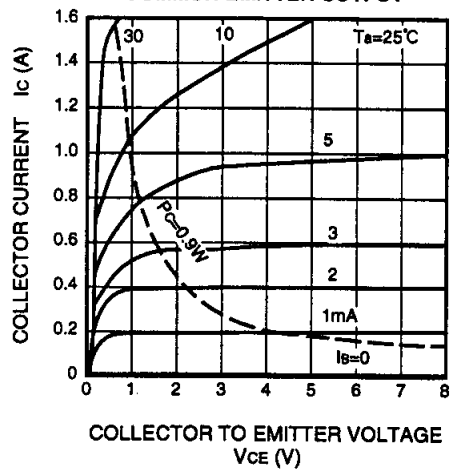
Item	C	D	E
h_{FE}	55 to 110	90 to 180	150 to 300

TYPICAL CHARACTERISTICS

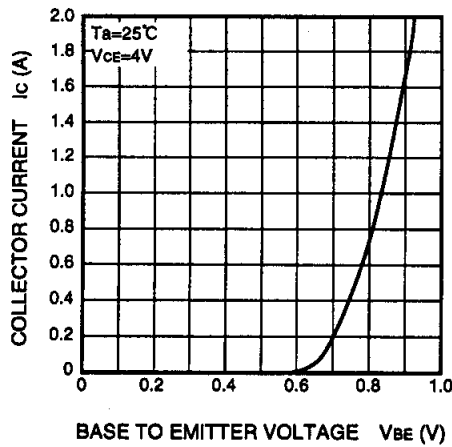
COLLECTOR DISSIPATION VS. AMBIENT TEMPERATURE



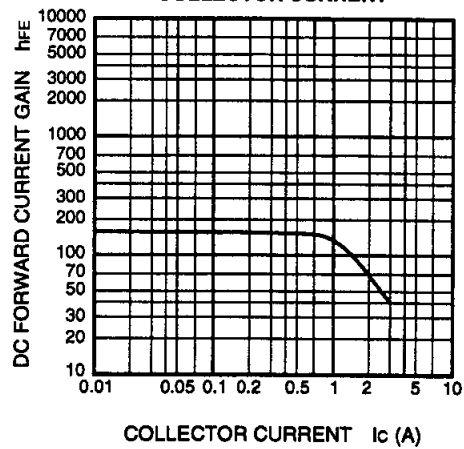
COMMON EMITTER OUTPUT



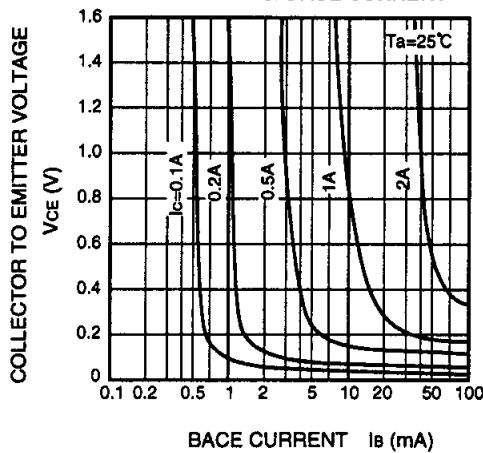
COMMON EMITTER TRANSFER



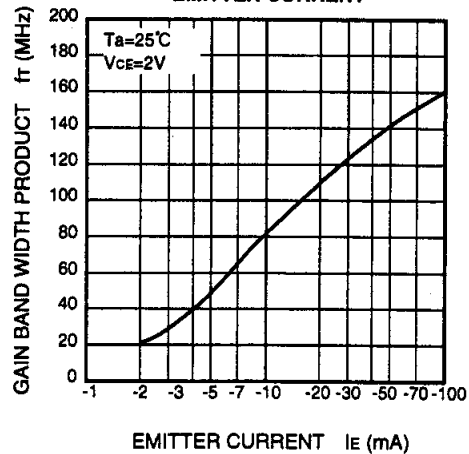
DC FORWARD CURRENT GAIN VS. COLLECTOR CURRENT



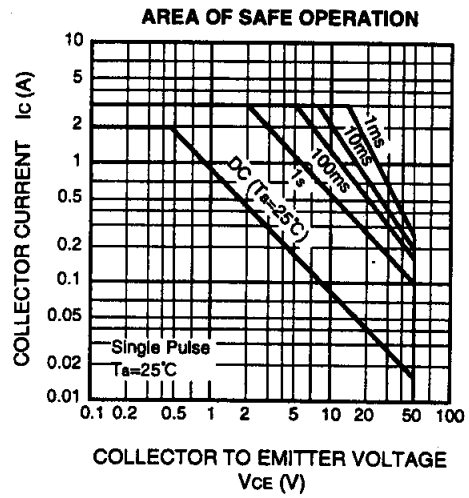
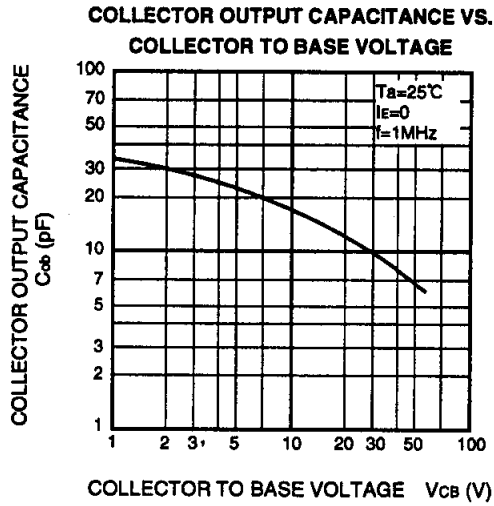
COLLECTOR TO EMITTER SATURATION VOLTAGE VS. BASE CURRENT



GAIN BAND WIDTH PRODUCT VS. EMITTER CURRENT



FOR HIGH CURRENT DRIVE APPLICATION
SILICON NPN EPITAXIAL TYPE



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